

INFORMATION

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COUNTRY East Germany

SUBJECT Activities of the Research Institute for
Navigation, Hydrology, and Soil Science

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THIS IS UNEVALUATED INFORMATION

The Research Institute for Navigation, Hydrology and Soil Science (Forschungsanstalt fuer Schiffahrt, Gewasser- und Bodenkunde), Berlin-Baumgartenweg, Rodelbergweg 6, engaged in the following activities during 1953:

1. Department of Hydraulic Engineering and Navigation

- a. This Department, with approximately 70 workers, including Dipl.-Ing. Blau (fnu), Dipl.-Ing. Meissner (fnu), Dipl.-Ing. Nakel (fnu), Dipl.-Ing. Physicist Frau Wagenbreth (fnu), Ing. Thomsen (fnu), Ing. Giese (fnu) and Ing. Schinke (fnu), formed the nucleus of the Research Institute. The capabilities of the scientific workers were above average. However, the Department lacked experienced testing engineers and the few experts were overworked. Difficulties in the procurement of material caused frequent delays in the completion of the orders.
- b. Facilities for the Department consisted of approximately 6,000 square meters of shed space in Karlshorst in addition to the 700 square meters of shed space and 10,000 square meters of open space in Potsdam.
- c. The principal assignments of the Department were model-experiments for river and coastal construction projects and the formation of expert opinions on these problems. In September 1953 work was being performed on models of the Elbe River near Dresden and Magdeburg and on a model of the Oder River near Gauerwitz (sic). The project envisaged a solution to the problems in hydraulic engineering in these areas. In Potsdam two large models were used to determine the most favorable harbor approach to Stralsund. For years the port entrance had been blocked by continuous sanding. One model tested the current conditions in the neighborhood of the Isle of Ruegen and the second model tested conditions between Ruegen and Hiddensee. Plans were made to dredge the Bodden between Ruegen and Hiddensee and cut through the northern part of Hiddensee. Experiments will be concluded in the spring of 1954. Another large model (3,400 square meters) concerned the improvement of the port entrance at Wismar. Experiments on dams and channel weirs were concluded and will be published in the near future. A model of the sluice for the Niederparetz Canal also was tested at the Research Institute. Larger projects and experiments on the canalization of the Elbe River were planned for the future.

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Because of numerous orders for practical application, fundamental research was forced into the background. One basic experiment concerned suspended materials. Several theoretical experiments, such as one on the development of pot holes in canals and rivers, were in progress.

The State Secretariat of Shipping was the agency which placed orders with the Department of Hydraulics Engineering. Ing. Aul (fau) of the Bureau of Navigation and Dr. Ing. Klam (fau) of the State Secretariat provided liaison with the Research Institute. Both were members of the SED. The Institute also received a large order from the Sea Police. This dealt with the construction of the so-called "fishing ports" on the Isle of Rugen. After 17 June 1953 the order was withdrawn and the Director of the Research Institute personally had to turn in to the Ministry of the Interior all the material concerning the project. The engineers who had been employed on the project, Dr. Zachiesche (fau), Dipl.-Ing. Aul, Ing. Thomsen, Ing. Wellner (fau), Dipl.-Ing. Jaska (fau), Martin (fau) and Vogel (fau), were required to take another oath. Although the largest part of this assignment was discontinued, some of the work already had been completed, particularly the examination of ground conditions in the area of Glowe.

VI. Department of Foundation Engineering

a. The Department employed approximately 40 workers and was directed by Dipl.-Ing. Jaska. The Director of the laboratory was Chief Engineer Severnitsch (fau), a woman from West Berlin. She had the reputation of being very proficient and was given an individual contract.

b. The Department was concerned not only with construction projects in the field of hydraulic engineering but also with the fundamentals of construction and the compilation of surveys of all large construction projects in the DDR. Specialized firms were responsible for drilling at the construction site but were under the supervision of a drilling expert appointed by the Research Institute. The Department performed pressure tests and friction tests on various samples and compiled the results into surveys. Important assignments in 1953 included studies for the construction of the Eisenhuetten Kombinat Ost, the Niedersperrde Canal, Stalinallee, the State Opera House, the Soviet Embassy on Unter den Linden, the fishing port at Glowe, Rapp-Bode-Dam, the Institute for Physical Sciences in Leipzig and the Querstraten housing project. The projects of the Department of Foundation Engineering were requested by the Ministries, the Bau-Union and the State Secretariat of Shipping.

c. Basic research suffered after the death of Prof. Onda (fau). The only basic research in progress in September 1953 concerned methods for the most efficient construction of dams. The technical equipment was poor and only very limited space was available in the building on Rodelburgweg. The new construction at Alt-Strahlau will provide five times more laboratory space. However, the procurement of the necessary instruments and apparatus will remain difficult because these are made principally of nonferrous metals.

3. Geophysics Group

a. This group, directed by Dipl. Geophysicist Dr. Schumann (fau), evolved from the Department of Foundation Engineering. The group worked on only one project. Whereas the Department of Foundation Engineering continued foundation tests in the mechanical field, Dr. Schumann attempted to develop a special process based on former research done by the DMEBQ. He completed construction of an oscillator required for his work. Although more than DME 100,000 were spent for this experiment, Dr. Schumann's progress was very slow. The deadline for his research assignment was 31 May 1953 but in September the apparatus (Gerat) had not been completed and practical tests

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had not started. Dipl.-Ing. Gedenstuebrer (fau) was Dr. Schumann's assistant. Both men were under 30 years of age and their work was a controversial issue.

Department of Machine Technique and Thermal Technique

- a. This Department was directed by Ing. Roebke (fau) and received its assignments from the State Secretariat of Shipping and the DSV. The Department lacked personnel. No experts were available. Roebke had some knowledge in his field but he did not have qualified assistants.
- b. Two research assignments were completed, the results of which were treated confidentially. One of the projects dealt with the improvement of purification methods for water to be used in ship boilers. The experiments showed that the formation of boiler scale could be reduced considerably by the addition of chemicals. In September 1953 several experimental vessels of the DSV were using the process. All vessels of the DSV were to employ the method in 1954. The State Secretariat of Shipping expected to save about DME 600,000 yearly on coal by using the new process. Because of this, a bonus was suggested for Roebke. The second assignment concerned construction of an open-air grate (Freiluftrost) for ship boilers. Through utilization of this grate large amounts of fuel will be saved. The grate was installed on several vessels on an experimental basis.
- c. The Department did not have its own testing installation and had to rely for its experiments, on the vessels put at its disposal by the DSV. The stationary testing installation in Alt-Strandau was to be completed by the end of 1953. Technical equipment was lacking. Only two very old ship-propelling installations were put at the disposal of the Department. These had been in a shipyard and were left in the water for a long time. Attempts were being made to rebuild the machines and put them to use.

5. Department of Ship Inspection

- a. This Department, directed by Ing. Baiese (fau), had no scientific importance. It was the successor to the former Reichsgast for Ship Inspection for the area of Germany which is now the East Zone. In addition to the Director, the Department employed one old, experienced worker who was formerly with the Reichsgast and four young surveying engineers.
- b. The Department controlled and confirmed all calibration certificates originating in the East Zone for inland waterway- and sea-going vessels, and also developed an instrument which was an improvement over former calibration instruments. In September 1953 the work consisted of formulating new calibration regulations for the DDR. The Department was also charged with control of the training of calibration experts who were employed by the waterway offices.

6. Department of Traffic Research

- a. Dr. Pusch (fau) was the Director of this Department. The staff was very well qualified. Among the most important workers were Dr. Reichmann (fau), Dipl.-Economist Raschel (fau), Dipl.-Economist Ranztsch (fau) and Captain Gensersfeld (fau).
- b. The principal tasks of the Department concerned research on the movement of merchandise within the DDR and within the export trade, organization of night navigation, compilation of data concerning the profitability of shipping and transshipping, training vessel problems and economic surveys of big construction projects in the field of hydraulic engineering. The Department also cooperated in the establishment of new freight tariffs. The Department had a library which was very poor. Most of the statistical material required for research on the movement of goods was not available.

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The Department of Traffic Research, although only one and one-half years old, already had developed into the premier child of the Research Institute. The State Secretariat of Shipping was the only agency for which the Department performed work. The State Secretariat desired surveys which emphasized the necessity of contemplated projects. However, the members of the Department, especially Dr. Pasch, were serious, responsible scientists. Their surveys proved, in most cases, that the projects of the State Secretariat were nonsense from an economic point of view. This was shown especially in the plans for improvement of Mecklenburg waterways. Because of these opinions the Department was not looked upon with favor. Suggestions were made for dissolving the Department but Traffic Minister Rheingruber (fna) would not permit it. Plans were made to remedy the situation by replacing the capable Dr. Pasch with Dipl.-Ing. Hess (fna) who had been working for the Central Committee (ZK) of the SED. Hess was transferred to the Research Institute on 1 October 1955. His appointment as Department Director may indicate the end of the Department because the remaining scientists will not write surveys for which they cannot accept responsibility.

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1. Comment. The purpose of this oath is not clear. It may possibly have been an oath of secrecy concerning the construction of the "fishing ports."

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2. Comment. Possibly Deutsche Seereederei und Schiffsverleiher.

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Comment. Reference to "apparatus" is not clear.

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Comment. Deutsche Schifffahrt Nachrichten-Gesellschaft (German Navigation and Transshipping Company).

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